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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/810,635	03/29/2004	Jang Hui Cho	1740-000012/US/COA	9587
30593 7590 01/25/2007 HARNESS, DICKEY & PIERCE, P.L.C. P.O. BOX 8910 RESTON, VA 20195			EXAMINER SHIBRU, HELEN	
			ART UNIT 2621	PAPER NUMBER

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/25/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

## Office Action Summary

Application No.

10/810,635

Applicant(s)

CHO ET AL.

Examiner

HELEN SHIBRU

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 05 December 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-4, 6, 8, 9 and 14-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6, 8-9, 14-36 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |                                                                                                            |                                                                                         |
|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                                           | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____                                                |

**DETAILED ACTION**

***Response to Amendment***

1. The amendments filed on 12/05/2006 have been entered and made of record. Claims 1-4, 6, 8-9, are 14-36 are pending and claims 5, 7, and 10-13 are cancelled.

***Response to Arguments***

2. Applicant's arguments filed 12/05/2006 have been fully considered but they are not persuasive. Applicant's argument is addressed in the rejection(s) sets forth below.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-4, 6, 8-9, 14-36 are rejected under 35 U.S.C. 102(e) as being anticipated by Okada (US Pat. No. 2002/0046328).

Regarding claim 1, Okada discloses a recording medium having a data structure for managing reproduction of at least video data representing multiple reproduction paths, comprising:

a data area storing at least video data as a transport stream in more than one file, each file associated with a different one of the multiple reproduction paths, and the files being interleaved

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with one another (see page 2 paragraphs 0034-0037, page 8 paragraph 0175, paragraph 0193 and 0234, and figures 4, 26, and 29); and

a navigation area storing at least one navigation list (Fig. 44 shows the state transition of the list storing the stream management/navigation table and empty zone management/navigation table), the at least one navigation list including one or more navigation data items (fig. 42 shows an example of the configuration of a table 130 for management of an empty area of each zone on the disk 110. Each zones contains information indicating an empty area in each zone and information indicating full area to which data has been recorded. See paragraph 0314) and controlling a reproduction order of the one or more navigation data items (the MPU receives a read/write instruction input through the line 54, and determines the access execution order and read/write position of the disk based on the disk scheduling algorithm. See paragraph 0170. The read/write process performed on each channel is scheduled in order from the earliest deadline. See paragraph 0191), at least one navigation data item referencing more than one map (data are recorded in zones 1 and 6 simultaneously through channel 2 and channel 1. See paragraph 0296. If it is an instruction to record data through two channels, then data is alternately recorded in an inner zone through one channel and in an outer zone through other channel. See paragraph 0303), each map being associated with one of the files and providing, position data for the video data of the associated file (the table 120 comprises m streams 1-m. The stream i refers to the information about the stream data of i channel(s). Each stream has a data structure and the amount of data recorded at serial address is linked in a list structure. See paragraph 0313).

Regarding claim 2, Okada discloses wherein each file is divided into data blocks, and the fries are interleaved with one another on a data block by data block basis (see figure 29).

Regarding claim 3, Okada discloses wherein each data block represents at least an intra-coded picture of video data (see figure 12 and paragraphs 0005-0009 in page 1 and paragraph 0167 in page 8).

Regarding claim 4, Okada discloses wherein each data block represents at least one group of pictures (GOP) (see figure 4).

Regarding claim 6, Okada discloses each of the one or more navigation data items provide navigation information for reproducing at least one of the files (see figures 41-44 and paragraphs 0170, and 0313-0315).

Regarding claim 8, Okada discloses the at least one navigation data item includes a multiple reproduction path indicator indicating that the at least one navigation data item provides navigation information for multiple reproduction paths (see paragraphs 0323-0324).

Regarding claim 9, Okada discloses the navigation data item includes a multiple reproduction path indicator indicating that the navigation data item provides navigation information for multiple reproduction paths (see paragraphs 0323-0324).

Regarding claim 14, Okada discloses each reproduction path represents a digital channel (see pages 1-2).

Regarding claims 15, Okada discloses each reproduction path represents a sub-channel of an RF channel (see pages 1-2).

Claim 16 is rejected for the same reason as discussed in claim 1 above.

Regarding claim 17, Okada discloses a method of reproducing a data structure for managing reproduction duration of at least video data representing multiple reproduction paths, comprising:

reproducing at least video data as a transport stream in more than one file from the recording medium, each file associated with a different one of the multiple reproduction paths, and the files being interleaved with one another (see paragraphs 0013-0048); and

reproducing at least one navigation list (when an instruction refers to read, the stream data having stream number of mx is read by referring to the list of the Stream (mx) on the table 120. See paragraph 0342 and fig. 40), one or more navigation items and a plurality of maps, the at least one navigation list including one or more navigation data items controlling a reproduction order of the one or more navigation data items (see paragraphs 0170 and 0191), at least one navigation data item referencing more than one map (see paragraph 0296 and 0303), each map being associated with one of the files and providing position data for the video data of the associated file (see paragraph 0313).

Regarding claim 18, Okada discloses an apparatus for recording a data structure for managing reproduction duration at least video data representing multiple reproduction paths, comprising: a driver for driving an optical recording device to record data on the

recording medium; a controller for controlling the driver to record at least video data as a transport stream in more than one File on the recording medium, each file associated with a different one of the multiple reproduction paths, and the Files associated with a different one of the multiple reproduction paths, and the Files being interleaved with one another (see figure 12 and rejection of claim 1), the controller controlling the driver to record at least one navigation list, one or more navigation data items and a plurality of maps, the at least one navigation list including one or more navigation data items controlling a reproduction order of the one or more navigation data items, at least one navigation data item referencing more than one map, each

map being associated with one of the files and providing position data for the video data associated file (see rejection of claim 16 above).

Claim 19 is rejected for the same reason as discussed in claims 17-18 above.

Claim 20 is rejected for the same reason as discussed in claim 1 above.

Claims 21-24 are rejected for the same reason as discussed in claims 2, 3, 8 and 15 respectively above.

Claims 25-28 are rejected for the same reason as discussed in claims 2, 3, 8 and 15 respectively above.

Claims 29-32 are rejected for the same reason as discussed in claims 2, 3, 8 and 15 respectively above.

Claims 33-36 are rejected for the same reason as discussed in claims 2, 3, 8 and 15 respectively above.

### ***Claim Rejections - 35 USC § 101***

5. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

6. Claims 1-4, 6, 8-9, and 14-15 are rejected under 35 U.S.C. 101 because the claims are directed to a recording medium storing nonfunctional descriptive material.

Data structures not claimed as embodied in computer-readable media are descriptive material per se and are not statutory because they are neither physical “things” nor statutory processes. See, e.g. Warmerdam, 33 F. 3d at 1361, 31 USPQ2d at 1760 (claim to a data structure per se held nonstatutory) and merely claiming nonfunctional descriptive material stored in a computer-readable medium does not make it statutory. In addition a mere arrangements or

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compilations of facts or data, are merely stored so as to be read or outputted by a computer without creating any functional interrelationship either as part of the stored data or as part of the computing processes performed by the computer then such descriptive material alone does not impart functionality either to the data as so structured, or to the computer, and therefore are not statutory. See MPEP 2106.IV.B.1.

Applicant states in the remarks filed on 12/15/2006 that “the it is clear that the ‘recording medium having data structure for managing...is a recording medium storing functional descriptive material.”

In response the Examiner respectfully disagrees. The recording medium can be a material that records data, like for example paper. Paper is a recording medium since data can be recorded on it. In addition the recording medium and the data structure alone cannot perform any activity. They have to accompanying by a computer. Furthermore after performing steps, there is no outcome recited in the claim and therefore it is not functional.

### ***Double Patenting***

7. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned



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with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

8. Claims 1-4, 14-19 provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-4, 14-19 of copending Application No. 10/810823. Although the conflicting claims are not identical, they are not patentably distinct from each other because of the reasons sets forth below.

The copending Application claim 1 recites a recording medium having a data structure for managing reproduction of at least video data representing multiple reproduction paths, comprising:

a data area storing at least video data as a transport stream in more than one file, each file associated with a different one of the multiple reproduction paths, and the files being interleaved with one another; and

a navigation area storing a first navigation unit, the first navigation unit including one or more second navigation units and controlling a reproduction order of the second navigation units, at least one second navigation unit referencing more than one third navigation unit, each third navigation unit indicating a separate file of video data in the data area to reproduce.

Therefore claim 1 of the present Application is broader than the copending Application 10/810823 and; therefore, obviousness-type double patenting is applied.

The subject matter of claims 2-4, 15-19 can be found in the copending application claims 2-4, 15-19 respectively.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

***Conclusion***

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to HELEN SHIBRU whose telephone number is (571) 272-7329. The examiner can normally be reached on M-F, 8:30AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, THAI Q. TRAN can be reached on (571) 272-7382. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Helen Shibu  
January 8, 2007

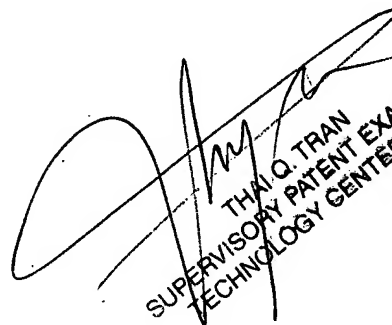
1. Fig. 44 shows the state transition of the list storing the stream management/navigation table and empty zone management/navigation table.
2. fig. 42 shows an example of the configuration of a table 130 for management of an empty area of each zone on the disk 110. each zones contains information indicating an empty area in each zone and information indicating full area to which data has been recorded. Paragraph 0314

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3. the MPU receives a read/write instruction input through the line 54, and determines the access execution order and read/write position of the disk based on the disk scheduling algorithm (0170). Further discloses the read/write process performed on each channel is scheduled in order from the earliest deadline (0191).

4. Through channel 2 and channel 1 data are recorded in zones 1 and 6 simultaneously. (0296). Further discloses if it is an instruction to record data through two channels, then data is alternately recorded in an inner zone through one channel and in an outer zone through other channel (0303).

5. the table 120 comprises m streams 1-m. the stream I refers to the information about the stream data of I channels. Each stream has a data structure and amount of data recorded at serial address is linked in a list structure 0313)

  
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SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800